ANALYST:		VPDES NO	

Parameter: Total Kjeldahl Nitrogen
Method: Direct Potentiometric
04/01

METHOD OF ANALYSIS:

	EPA Methods for Chemical Analysis 351.4

		Y	N
1)	Is analysis performed with a pH meter with an expanded millivolt scale capable of 0.1 mV resolution between - 700 mV and + 700 mV or an ion specific meter? [5.1]		
2)	Is a Teflon coated stirrer bar and magnetic stirrer used during the analysis? [5.3]		
3)	Is a thermally insulated magnetic stirrer used during the analysis? [5.3]		
4)	Is the electrode used an Orion Model 95-12 or 95-10, EIL Model 8002-2, Beckman Model 39565 or equivalent? [5.2]		
5)	For short term storage (week or less) is probe stored as specified in the manufacturers instructions? [Mfr.]		
6)	For long term storage (longer than one week) is the electrode drained, rinsed with distilled water and stored dry? [Mfr.]		
7)	Is ammonia free water prepared immediately before use and used for all aspects of the procedure? [6.1]		
8)	Are standards prepared using Class A volumetric glassware? [Permit]		
9)	Are standards treated the same as samples? [7.4.1]		
10)	For macro Kjeldahl analysis is 15 mL of 10N NaOH added to 100 mL of digested sample (micro Kjeldahl 6 mL 10N NaOH to a 50 mL aliquot)? [macro-7.4.2; micro-7.2.1 and 4.4.3]		
11)	Is 4 mL of NaOH-NaI-EDTA reagent added to the sample after the electrode has been immersed? [7.4.2 / 7.4.3]		
12)	Is the calibration curve prepared using 4 cycle semilogarithmic paper, with the ammonia nitrogen in mg/L on the logarithmic axis and the electrode potential in mV on the linear scale; or by using a computer program which has been verified by either a hand-held calculator or semilog paper? [8]		
13)	Are direct readout meters calibrated according to manufacturer's instructions? [Mfr.]		
14)	Are standards read from lowest to highest concentration? [8]		
15)	Is the instrument slope documented to be within manufacturer's specifications each sample run? (Corning -55 ±5 mV, Orion -57 ±3 mV, Accumet -59 ±4 mV, Hach -58 ±4 mV) [Mfr.]		
16)	Is the electrode rinsed with distilled water and blotted dry between measurements? [Mfr.]		
17)	Are samples and standards stirred so that bubbles are not sucked in the solution? [Mfr.]		
18)	Is the electrode held at a 20 - 30 degree angle in the sample during analysis? [Mfr.]		
19)	Is the electrode tip free of bubbles during operation? [Mfr.]		
20)	Is a new curve drawn when calibration standards are not within ± 5.0% of the curve? [Permit]		

		Y	N
21)	Are results recorded as soon as the meter stabilizes? [7.4]		
22)	Are results recorded in terms of ammonia nitrogen? [8]		
23)	Are standards and samples at the same temperature when analyzed? [7.4.1]		
24)	Are all calibrations, calculations, temperatures recorded? [Permit]		

PROBLEMS: